

REMARKS

Applicant respectfully requests further examination and reconsideration in view of the remarks set forth below. Claims 1-5, 7-15, 17, 18, 20, 21, 27, 29-40, 42, 43, 45, 46, 52, 55, and 58-60 were previously pending in this application. In the Office Action, Claims 58-60 are rejected. Also within the Office Action, Claims 1-5, 7-15, 17, 18, 20, 21, 27, 29-40, 42, 43, 45, 46, 52, and 55 are allowed. By the above amendments, Claims 58, 59, and 60 are amended. Each of the rejections is fully addressed below. Accordingly, Claims 1-5, 7-15, 17, 18, 20, 21, 27, 29-40, 42, 43, 45, 46, 52, 55, and 58-60 are currently pending in this application.

Rejections under 35 U.S.C. § 102

Within the Office Action, Claims 58-60 stand rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,185,535 issued to Hedin et al. (hereafter "Hedin"). The Applicant respectfully traverses this rejection.

The present invention is a system and method for speech recognition using an adaptive multi-pass technique. In one embodiment, the first pass results identify a characteristic of the spoken input. Thereafter, it is determined whether to run a second pass. If a second pass is run, the second pass speech recognition technique is selected from a plurality of available speech recognition techniques, taking into account the identified characteristic from the results of the first pass. For example, the characteristic of the spoken input can be the gender of a speaker of the spoken input or a type of telephone channel the speaker is calling from. In this case, the plurality of speech recognition techniques includes one specific to female speakers, one specific to male speakers and one specific to callers via a hands-free telephone. The most appropriate of these speech recognition techniques is selected for the second pass. Additionally, if the first pass is unsuccessful at identifying the characteristic of the spoken input, then multiple ones of the plurality of speech recognition techniques can be selected for the second pass and the their results combined.

In a second embodiment, the first pass is omitted altogether and, instead, determining the characteristics of the spoken input by a supplementary input by the caller. For example, the caller can be prompted to press the number "1" (one) on the keypad of his/her telephone if calling from a hands-free telephone. Alternately, the caller can be prompted to respond verbally to an inquiry regarding his/her telephone channel type. The input characteristic is then used to select an appropriate speech recognition technique.

In another embodiment, the speech recognition technique utilized for the first pass can be varied (e.g. selected from a plurality of possible speech recognition techniques) based upon prior utterances. For example, if the speaker of prior utterances is determined to be female; then the first pass can be tailored to female speakers. If the results suddenly worsen, this would indicate that a change in the speech recognition model is needed, as would occur if the female speaker handed the phone to a male speaker.

Hedin teaches a system in which a first speech recognition technique is always used as a first pass on a given spoken input. This first speech recognition technique is performed by a first automatic speech recognition system (ASR) 227. Hedin also teaches that where the first speech recognition technique is ineffective, a second speech recognition technique is always used as a second pass on the same given spoken input. This second speech recognition technique is performed by a second ASR 307. There is no hint, teaching or suggestion in Hedin that indicates the first speech recognition technique (ASR 227) is modified, or that the second speech recognition technique (ASR 307) is used instead of the first speech recognition technique (ASR 227) to perform a first pass on any given spoken input. Therefore, the first speech recognition technique of Hedin (ASR 227), which is never modified, always performs the first pass on a spoken input.

Further, there is no hint, teaching, or suggestion within Hedin that indicates identifying a characteristic of a spoken input or of the speaker providing the spoken input. Still further, there is no hint, teaching, or suggestion within Hedin that indicates selecting a speech recognition technique according to the identified characteristic.

The amended independent Claim 58 is directed to a method of recognizing spoken input received from a source of the spoken input. The method comprises the steps of: receiving the spoken input from the source of the spoken input, wherein the spoken input includes at least a first utterance and a second utterance; performing a first pass according to a first speech recognition technique on the first utterance; identifying a characteristic of the first utterance; selecting a second speech recognition technique from a plurality of speech recognition techniques according to the identified characteristic; selectively performing a second pass on the first utterance according to the second speech recognition technique; and performing a first pass on the second utterance according to the second speech recognition technique. As discussed above, Hedin does not teach identifying a characteristic of a spoken input. Further, Hedin does not teach selecting a speech recognition technique according to the identified characteristic. Still further, Hedin does not teach using a first speech recognition technique on a first portion of a spoken input, and then using a second speech recognition, which is based on the identified characteristic of the first portion, on a subsequent portion of the spoken input. For at least these reasons, the independent Claim 58 is allowable over of Hedin.

The amended independent Claim 59 is directed to method of recognizing spoken input received from a source of the spoken input. The method comprises the steps of: receiving an identifying characteristic from a speaker; receiving the spoken input from the speaker; selecting a first speech recognition technique from a plurality of speech recognition techniques according to the identifying characteristic; performing a first pass according to the first speech recognition technique on the spoken input; and selectively performing a second pass according to a second speech recognition technique on the spoken input. As discussed above, there is no hint, teaching, or suggestion within Hedin that information is obtained regarding the speaker, and that the obtained information is used to select a speech recognition technique. For at least these reasons, the independent Claim 59 is allowable over of Hedin.

The amended independent Claim 60 is directed to a method of recognizing spoken input received from a source of the spoken input. The method comprises the steps of: receiving a first

spoken input from the source; performing a first pass speech recognition technique on the first spoken input; selectively modifying the first pass first speech recognition technique to a modified first pass speech recognition technique based on a result of the first pass speech recognition technique performed on the first spoken input; and performing the modified first pass speech recognition technique on a second spoken input received from the source. As discussed above, Hedin does not teach modifying a speech recognition technique used for a first pass. Further, Hedin does not teach using a speech recognition technique for a first pass on a first spoken input received from a given source, and then modifying the speech recognition technique based on results of the first spoken input such that the modified speech recognition technique is used for a first pass on subsequent spoken input received from the same given source. For at least these reasons, the independent Claim 60 is allowable over of Hedin.

Within the Office Action, Claims 1-5, 7-15, 17, 18, 20, 21, 27, 29-40, 42, 43, 45, 46, 52, and 55 are allowed.

For the reasons given above, the Applicant respectfully submits that all of the claims are now in a condition for allowance, and allowance at an early date would be appreciated. Should the Examiner have any questions or comments, he is encouraged to call the undersigned at (408) 530-9700 to discuss the same so that any outstanding issues can be expeditiously resolved.

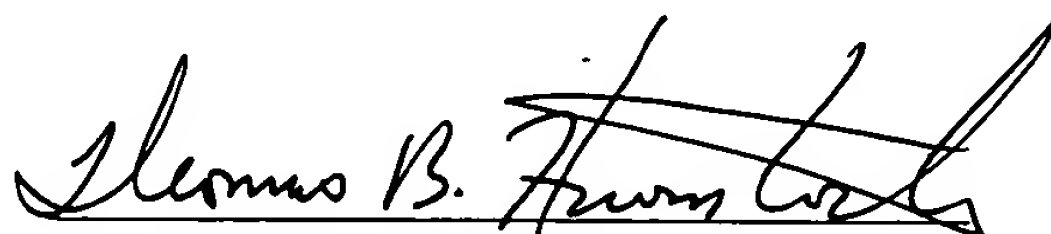
The Commissioner is authorized to charge any underpayment or credit any overpayment to Direct Deposit Account No. 18-1275 for any matter in connection with this response, including any fee for extension, which may be required.

Respectfully submitted,

HAVERSTOCK & OWENS LLP

Dated: 6-8-05

By:



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CERTIFICATE OF MAILING (37 CFR § 1.8(a))

I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited with the U.S. Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to the: Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450

HAVERSTOCK & OWENS LLP.

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